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Section I: Top Ten Reportable Diseases in Missouri as of October 13, 2004*

The following data were reported through the MISSOURI HEALTH SURVEILLANCE INFORMATION SYSTEM (MOHSIS) and the TUBERCULOSIS INFORMATION MANAGEMENT SYSTEM (TIMS). For diseases/conditions reported through MOHSIS, counts include confirmed and probable cases only, except for acute Hepatitis C that includes only confirmed cases. For tuberculosis reported through TIMS, counts include only verified cases of tuberculosis disease.

As of Report Week #39 (week ending October 2, 2004), influenza and chronic Hepatitis C were the two most common reportable diseases/conditions in Missouri; with over two thousand reported cases each (**Table 1**). Campylobacteriosis, salmonellosis, and giardiasis were the next most common diseases; with between four hundred and five hundred reported cases each.

Of the ten diseases/conditions with the highest number of reported cases through Report Week #39, the year-to-date case count of five significantly exceeded the 5-year median value (**Table 1**). These five diseases/conditions were influenza, chronic Hepatitis C, pertussis, and acute and chronic Hepatitis B. The 2004 year-to-date case counts for chronic Hepatitis C, pertussis, and chronic Hepatitis B were substantially higher (i.e., >200%) than the 5-year median value. [NOTE: A portion of this increase may reflect improvements in, or changes to, reporting.] Conversely, the year-to-date case count of three diseases (i.e., salmonellosis, giardiasis, and shigellosis) was significantly below the 5-year median (**Table 1**).

** Data analysis in this section does not include sexually transmitted diseases. Additionally, all 2004 communicable disease data presented in this section are provisional.*

Section I: Top Ten Reportable Diseases in Missouri - Continued

Table 1. Top Ten (by Count) Reportable Diseases and/or Conditions in Missouri – **excluding sexually transmitted diseases** – as of October 13, 2004 (through Report Week #39).

Top Ten Disease/Conditions	Year-to-Date Count (2004)	5-Year Median Count (1999- 2003)	2004 as a Percent of the 5-Year Median	Crude Rate per 100,000^a
Influenza	4,312	2,421	178%	77.07
Hepatitis C, chronic infection ^b	2,232	992	225%	39.89
Campylobacteriosis	509	498	102%	9.10
Salmonellosis	498	564	88%	8.90
Giardiasis	405	502	81%	7.24
Pertussis	248	64	388%	4.43
Hepatitis B, chronic infection ^c	237	82	289%	4.24
Hepatitis B, acute infection	151	102	148%	2.70
Shigellosis	130	290	45%	2.32
Tuberculosis	90	101	89%	1.61

a) Crude rates calculated using 2000 U.S. Census data.

b) Prior to 2002, Hepatitis C, chronic infection was not reportable. As a result, the interpretive utility of the 5-year median value for chronic Hepatitis C is limited.

c) Hepatitis B, chronic infection did not become reportable until 2003. As a result, year-to-date data for 2003 was substituted for the 5-year median value.

Section II: In the Spotlight: Norovirus Infection & Outbreaks

The Epidemiology of Norovirus Infection.^{1,2} Noroviruses (or Norwalk and Norwalk-like virus) Noroviruses are a group of viruses that cause the “stomach flu,” or gastroenteritis. Symptoms of norovirus illness usually include nausea, vomiting, diarrhea, and some stomach cramping. In general, children experience more vomiting than adults. Low-grade fever, chills, headache, muscle aches, and a general sense of tiredness may occasionally occur. Norovirus disease is usually not serious, although people may feel very sick and vomit many times a day. Most people get better within 1 or 2 days. However, sometimes people are unable to drink enough liquids to replace the liquids they lost because of vomiting and diarrhea, leading to dehydration. Dehydration is usually only seen among the very young, the elderly, and persons with weakened immune systems.

Norovirus is found in the stool or vomit of infected people. People become infected in several ways, including:

- eating or drinking contaminated food and liquids,
- touching contaminated surfaces or objects and then placing one’s hand in one’s mouth, and
- having direct contact with another person who is infected and showing symptoms.

Day-care center or nursing home workers should pay special attention to children or residents who have norovirus illness. This virus is very contagious and can spread rapidly throughout such environments.

Symptoms of norovirus illness usually begin about 24 to 48 hours after ingestion of the virus. Infected individuals are contagious from the moment they begin feeling ill to at least 3 days after recovery. Some may be contagious for as long as 2 weeks after recovery. Anyone can become infected with these viruses. There are many different strains of norovirus, which makes it difficult for a person’s body to develop long-lasting immunity.

1. Department of Health and Human Services, Centers for Disease Control and Prevention > National Center for Infectious Diseases > Respiratory and Enteric Viruses Branch > Norovirus > Norovirus: Q&A. <http://www.cdc.gov/ncidod/dvrd/revb/gastro/norovirus-qa.htm>
2. Department of Health and Human Services, Centers for Disease Control and Prevention > National Center for Infectious Diseases > Respiratory and Enteric Viruses Branch > Norovirus > Norovirus: Technical Fact Sheet. <http://www.cdc.gov/ncidod/dvrd/revb/gastro/norovirus-factsheet.htm>

Section II: In the Spotlight: Norovirus Infection & Outbreaks - Continued

At least 50% of all foodborne outbreaks of gastroenteritis may be attributable to noroviruses. Among outbreaks of norovirus illness reported to CDC from July 1997 to June 2000, 57% were foodborne, 16% were due to person-to-person spread, and 3% were waterborne. In 23% of outbreaks, the cause of transmission was not determined. Common settings for outbreaks included restaurants and catered meals, nursing homes, schools, and vacation settings or cruise ships. Most foodborne outbreaks of norovirus illness are likely to arise through direct contamination of food by a food handler immediately before its consumption. Outbreaks have frequently been associated with consumption of cold foods, including various salads, sandwiches, and bakery products. Liquid items (e.g., salad dressing or cake icing) that allow virus to mix evenly are often implicated as a cause of outbreaks. Waterborne outbreaks of norovirus disease in community settings have often been caused by sewage contamination of wells and recreational water.

You can decrease your chance of coming in contact with noroviruses by following these preventive steps:

- Frequently wash your hands, especially after toilet visits and changing diapers and before eating or preparing food.
- Carefully wash fruits and vegetables, and steam oysters before eating them.
- Thoroughly clean and disinfect contaminated surfaces immediately after an episode of illness by using a bleach-based household cleaner.
- Immediately remove and wash clothing or linens that may be contaminated with virus after an episode of illness (use hot water and soap).
- Flush or discard any vomitus and/or stool in the toilet and make sure that the surrounding area is kept clean.

Persons who are infected with norovirus should not prepare food while they have symptoms and for 3 days after they recover from their illness. Food that may have been contaminated by an ill person should be disposed of properly.

Norovirus Illness Outbreaks in Missouri – 2003. In 2003, there were three (3) reported outbreaks of norovirus illness in Missouri.³ One hundred and sixty-six (166) known individuals became ill, while over 1,200 were exposed. The outbreaks occurred in the Eastern, Central, and Northwest Health Regions.

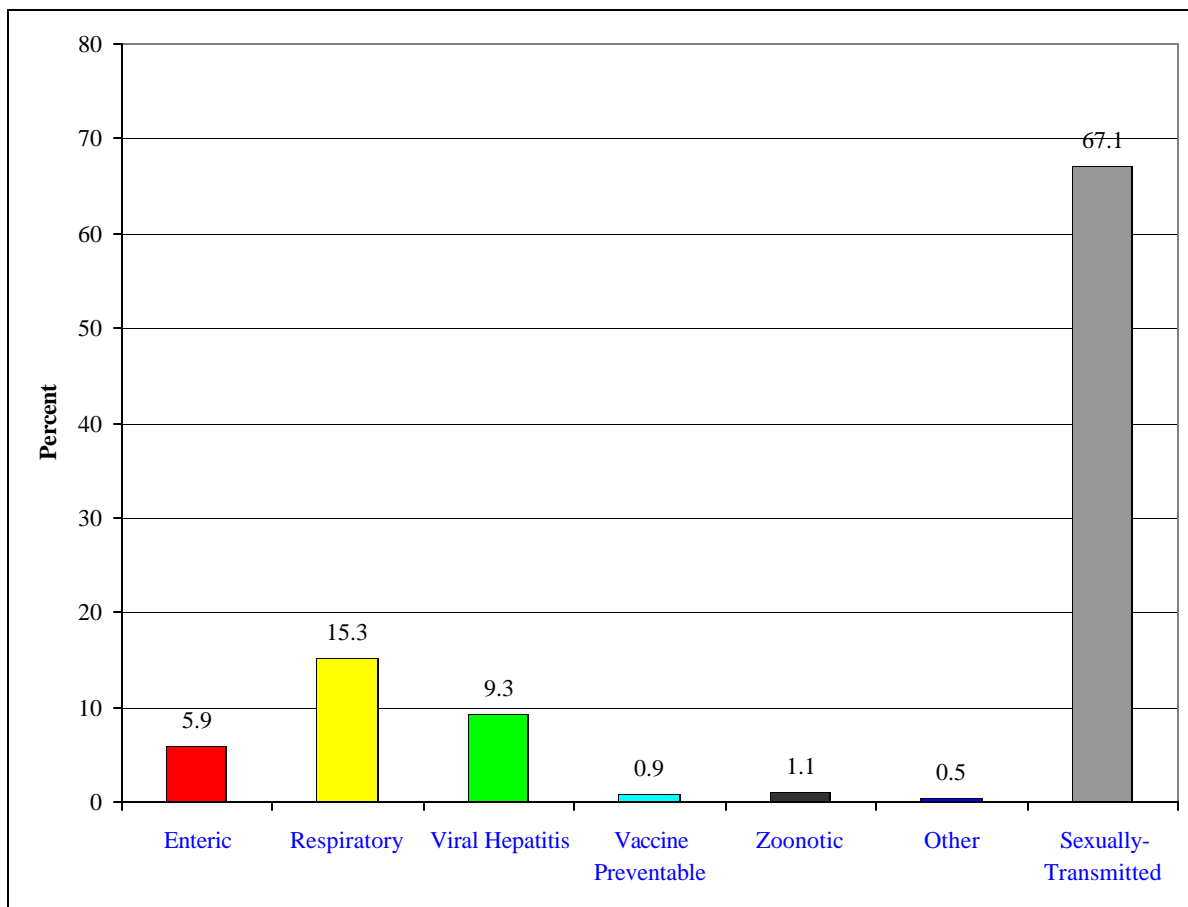
3. Summary of Disease Events Investigated in Missouri - 2003. Missouri Department of Health and Senior Services, Division of Environmental Health and Communicable Disease Prevention. Jefferson City, Mo.

Section III: Distribution of Reported Cases, by Disease Category*

As of October 13, 2004; sexually-transmitted diseases – excluding HIV – comprised the largest percentage of reported cases (67.1%) through Report Week #39 (week ending October 2, 2004) (**Figure 1**). Respiratory diseases comprised the next largest percentage of cases (15.3%), followed by viral hepatitis (9.3%) and enteric diseases (5.9%). The remaining disease categories (i.e., vaccine preventable, zoonotic, and other disease) each comprised approximately 1% or less of the total number of reported cases.

** This section does not include data for 'Animal (mammal) bite, wound, humans'. Data for sexually transmitted diseases (STD) are through August 31, 2004. Additionally, all 2004 communicable disease data presented in this section are provisional.*

Figure 1. Percentage of Reportable Diseases and/or Conditions in Mis souri – **excluding HIV** – reported as of October 13, 2004 (through Report Week #39) – by Disease Category.*



Section IV: Links to other Communicable Disease Surveillance Unit Reports*

Other Communicable Disease Surveillance Unit Reports

Report Title	Report Interval	Report Web Location
Summary of Notifiable Diseases in Missouri	annual	http://www.dhss.mo.gov/CommunicableDisease/Reports.html
Previous Communicable Disease Newsletters	monthly	http://www.dhss.mo.gov/CommunicableDisease/Reports.html
Rabies Surveillance	monthly	http://www.dhss.mo.gov/Rabies/index.html
HIV/STD Statistical Reports	various	http://www.dhss.mo.gov/HIV STD AIDS/Data.html
Influenza Surveillance	weekly	http://www.dhss.mo.gov/Influenza/Reports.html

* To obtain additional information please contact the Office of Surveillance at (573) 752-9071.

Other Communicable Disease Resources

Resource Title	Resource Web Location
List of Diseases and Conditions Reportable in Missouri	http://www.dhss.mo.gov/CommunicableDisease/reportablediseaselist2.pdf
MDHSS Disease Case Report (CD-1)	http://www.dhss.mo.gov/CDManual/CDappends.pdf
Communicable Disease Investigation Reference Manual	http://www.dhss.mo.gov/CDManual/CDManual.htm
Missouri Information for Community Assessment	http://www.dhss.mo.gov/MICA/nojava.html

Section III: Distribution of Reported Cases, by Disease Category:

Enteric

NUMBER OF REPORTED CASES AS OF OCTOBER 13, 2004	
<i>ENTERIC DISEASES</i>	
Acute gastrointestinal illness	6
Botulism, infant	1
Campylobacteriosis	509
Cryptosporidiosis	56
Cyclosporiasis	2
Escherichia coli O157:H7	60
E. coli, shiga toxin positive, serogroup non-O157:H7	11
E. coli, shiga toxin positive, not serogrouped	7
Giardiasis	405
Hemolytic uremic syndrome (HUS), post-diarrheal	12
Salmonellosis	498
Shigellosis	130
Typhoid fever (Salmonella typhi)	2
Yersiniosis	14
TOTAL	1713

Section III: Distribution of Reported Cases, by Disease Category:

Respiratory

NUMBER OF REPORTED CASES AS OF OCTOBER 13, 2004	
<i>RESPIRATORY DISEASES</i>	
Adult respiratory distress syndrome	1
Blastomycosis	2
Coccidioidomycosis	3
Influenza, laboratory-confirmed	4312
Legionellosis	21
Tuberculosis disease	90
TOTAL	4429

Section III: Distribution of Reported Cases, by Disease Category:

Viral Hepatitis

NUMBER OF REPORTED CASES AS OF OCTOBER 13, 2004	
<i>VIRAL HEPATITIS</i>	
Hepatitis A	36
Hepatitis B, acute	151
Hepatitis B, chronic	237
Hepatitis B Virus Infection, perinatal	0
Hepatitis B surface antigen in pregnant women	22
Hepatitis C, acute	6
Hepatitis C, chronic	2232
Hepatitis non-A, non-B, non-C	2
TOTAL	2686

Section III: Distribution of Reported Cases, by Disease Category:

Vaccine Preventable

NUMBER OF REPORTED CASES AS OF OCTOBER 13, 2004	
<i>VACCINE PREVENTABLE DISEASES</i>	
Measles (rubeola)	2
Mumps	3
Pertussis	248
Rubella, including congenital syndrome	1
TOTAL	254

Section III: Distribution of Reported Cases, by Disease Category:

Zoonotic

NUMBER OF REPORTED CASES AS OF OCTOBER 13, 2004	
<i>ZOONOTIC DISEASES</i>	
Brucellosis	3
Ehrlichiosis, human granulocytic	18
Ehrlichiosis, human monocytic	36
Ehrlichiosis, other/unspecified agent	5
Leptospirosis	1
Lyme(-like) disease	48
Malaria	17
Psittacosis	1
Q Fever	2
Rabies, animal	48
Rocky Mountain spotted fever	86
Tularemia	20
West Nile fever and viral encephalitis/meningitis	32
TOTAL	317

Section III: Distribution of Reported Cases, by Disease Category:

Other

NUMBER OF REPORTED CASES AS OF OCTOBER 13, 2004	
<i>OTHER DISEASES</i>	
Bacterial meningitis, other	7
Meningitis, fungal	1
Meningococcal disease, invasive	18
Creutzfeldt-Jakob disease	2
Haemophilus influenzae, invasive disease	28
Listeriosis	5
Streptococcal disease, invasive, Group A	54
Streptococcus pneumoniae, invasive in children <5 years	16
Streptococcus pneumoniae, drug resistant invasive disease	11
Toxic shock syndrome, staphylococcal	1
Toxic shock syndrome, streptococcal	0
TOTAL	143

Section III: Distribution of Reported Cases, by Disease Category:

Sexually-Transmitted

NUMBER OF REPORTED CASES AS OF AUGUST 31, 2004	
<i>SEXUALLY-TRANSMITTED DISEASES</i>	
Chlamydia trachomatis infections	13570
Gonorrhea	5705
Syphilis - early	67
Syphilis - latent and duration unknown	98
Syphilis - congenital	1
TOTAL	19441